53DS−900−−−075
53DS−900−−−076

Duct−Free Systems
Accessory Stacking Kit
Cooling Only Units (Size 018−060)

Installation Instructions

NOTE: Read and become familiar with these instructions before beginning installation.

SAFETY CONSIDERATIONS

Installing and servicing air-conditioning equipment can be hazardous due to system pressures and electrical components. Only trained and qualified personnel should install or service air-conditioning equipment. When working on air-conditioning equipment, observe the precautions provided in literature, tags, and labels attached to the unit.

Follow all safety codes. Wear safety glasses, protective clothing, and work gloves. Use quenching cloth for brazing operations. Have fire extinguisher available. Read these instructions thoroughly and follow all warnings or cautions included in literature and attached to the unit. Consult local building codes and National Electrical Code (NEC) for special requirements.

Recognize safety information. This is the safety-alert symbol ⚠. When you see this symbol on the unit and in instructions or manuals, be alert to the potential for personal injury.

Understand these signal words: DANGER, WARNING, and CAUTION. These words are used with the safety-alert symbol. DANGER identifies the most serious hazards which **will** result in severe personal injury or death. WARNING signifies hazards which **could** result in personal injury or death. CAUTION is used to identify unsafe practices which **may** result in minor personal injury or product and property damage. NOTE is used to highlight suggestions which **will** result in enhanced installation, reliability, or operation.

⚠ WARNING

ELECTRICAL SHOCK HAZARD

Failure to follow this warning could result in personal injury or death.

Before beginning any modification or installation of this kit, be sure the main electrical disconnect is in the OFF position. Ensure power is disconnected to the fan coil unit. On some systems both the fan coil and the outdoor unit may be on the same disconnect. Tag the disconnect switch with a suitable warning label. There may be more than one disconnect.

GENERAL

These instructions cover the installation of the accessory stacking kit for Cooling Only and Multi-Split Units. The kit is used in applications where there is a lack of adequate installation space for more than one unit.

NOTE: Stacking kit part number 53DS-900---075 does not contain stacking rails with notched brackets. Notched brackets are not required when stacking a small unit on top of another small unit. However, Stacking Kit part number 53DS-900---076 does include rails with notched brackets for use when stacking a small unit on top of a large unit. See Fig. 1

IMPORTANT: Stacking kit not for use with any type of snow or ice stand, or with heat pump units.

INSTALLATION

Refer to Table 1 for kit contents and usage.

⚠ WARNING

PERSONAL INJURY HAZARD

Failure to following this warning could result in personal injury.

Obtain help when stacking units. Personal injury can result from lifting of heavy equipment. Additional help may be required to align stacking rails when top unit is being positioned.

⚠ CAUTION

UNIT DAMAGE HAZARD

Failure to follow this caution may result in unit damage.
To avoid compressor damage, never turn unit on its side or top when installing kit components.
To avoid damage to electrical connections and refrigerant braze joints, ensure unit is fastened securely to concrete mounting pad before completing electrical and piping hookups. See Fig. 1.

STACKING EQUALLY SIZED UNITS

1. Unpack accessory kit contents. Check to be sure contents are not damaged or missing. (See Table 1.)
2. Secure unit bottom to concrete mounting pad at the 6 mounting feet locations, using lag bolts and anchors provided in kit. Use a masonry drill to drill 1/2-in. holes in concrete base for insertion of anchors.
3. Position 3 stacking rails on top of bottom unit as shown in Fig. 2. Ensure the stacking rails are lined up with the 6 mounting feet on bottom unit.
4. Position the top unit on the bottom unit. Place top unit mounting feet in the 3 stacking rails. Align mounting feet slots with bolt holes in stacking rails. See Fig. 1.

Table 1—Kit Contents and Usage

STACKING KIT PART NUMBER	USAGE UNIT SIZE		KIT CONTENTS
53DS−900−−−075 (Small chassis)	38HDF,HDR018 38HDF024,030 38HDR024	538ENF,ANR018 538ENF024,030 538ANR024	4 Fastener Brackets 3 Stacking Rails 2 Hex Head Bolts 4 Eye Bolts 6 Lag Bolts 6 Anchors 10 Lock Nuts 10 Flat Washers
53DS−900−−−076* (Large chassis)	38HDF036 38HDR030−060	538ENF036 538ANR030-060	4 Fastener Brackets 3 Stacking Rails 2 Hex Head Bolts 6 Carriage Bolts 4 Eye Bolts 6 Lag Bolts 6 Anchors 16 Lock Nuts 16 Flat Washers

* Use kit 53DS−900−−−076 when installing small chassis on top of large chassis.

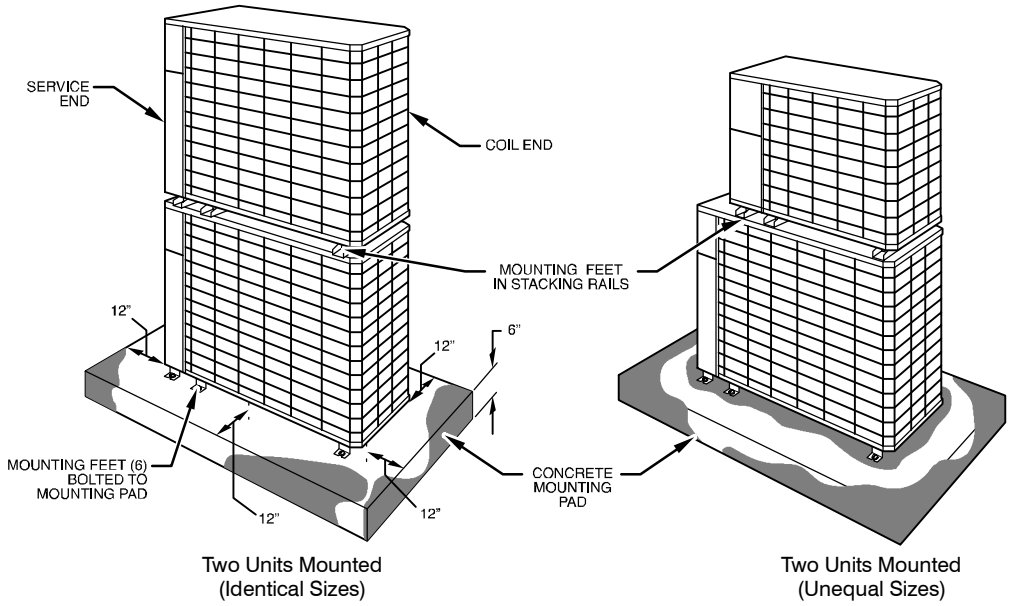


Fig. 1 − Stacking Units

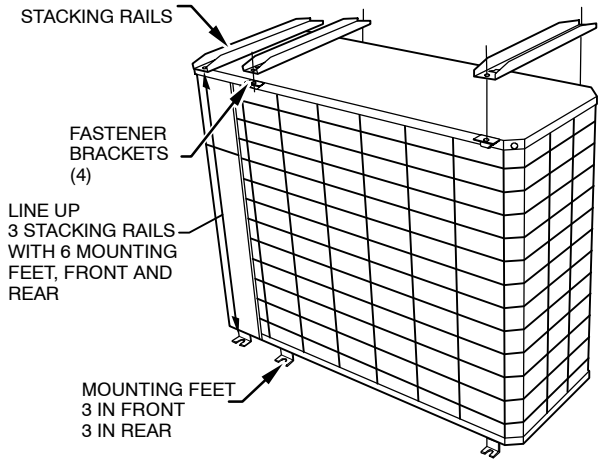

STACKING RAILS
FASTENER BRACKETS (4)
LINE UP 3 STACKING RAILS WITH 6 MOUNTING FEET, FRONT AND REAR
MOUNTING FEET 3 IN FRONT 3 IN REAR
A06418

Fig. 2 − Positioning Stacking Rails

5. Secure top unit mounting feet (coil end and middle only) to the stacking rails, using the 4 fastener brackets and 4 eye bolts. Use lock nuts and washers provided in kit. When installing fastener brackets, slip bracket flange behind top cover lip of the bottom unit. See Fig. 3.

⚠ CAUTION

UNIT DAMAGE HAZARD

Failure to follow this caution may result in unit damage.

All 4 brackets MUST be used to avoid possible equipment damage to stacked systems.

6. Attach service end mounting feet to the stacking rail with the hex head bolts provided. Use lock nuts and washers provided in kit. Tighten all bolts securely.

NOTE: Fastener brackets are not required for the service end.

STACKING SMALL UNIT ON LARGE UNIT

1. Unpack accessory kit contents (see Table 1). Check to be sure contents are not damaged or missing.
2. Secure unit bottom to concrete mounting pad at the 6 mounting feet locations, using lag bolts and anchors provided in kit. Use a masonry drill to drill 1/2-in. holes in concrete base for insertion of anchors.
3. Position 3 stacking rails on top of bottom unit as shown in Fig. 2. Ensure the stacking rail closest to coil end of unit lines up with the mounting feet closest to coil end on bottom unit. Remaining stacking rails are aligned with mounting feet furthest from coil end on top unit.
4. Position the top unit on the bottom unit. Place top unit mounting feet in the 3 stacking rails. Align mounting feet slots with notches in stacking rails. See Fig. 1.
5. Secure top unit mounting feet (coil end and middle only) to the stacking rails, using the 4 carriage bolts provided in kit. See Fig. 4. Install the 4 fastener brackets and 4 eye bolts (coil end and middle only). Use lock nuts and washers provided in kit. When installing fastener brackets, slip bracket flange behind top cover lip of the bottom unit. See Fig. 3.

⚠ CAUTION

UNIT DAMAGE HAZARD

Failure to follow this caution may result in unit damage.

All 4 brackets MUST be used to avoid possible equipment damage to stacked systems.

6. Attach service end mounting feet to the stacking rail with the carriage bolts and hex head bolts provided. Use lock nuts and washers provided in kit. Tighten all bolts securely.

NOTE: Fastener brackets are not required for the service end.

ROOFTOP APPLICATIONS

IMPORTANT: Special care must be taken when fastening equipment to a roof. Due to variations in roof design and construction, various fastening methods may be necessary to properly secure the equipment. Follow all local building codes when securing a unit to a roof structure. Ensure adequate condensate drainage is available to avoid water damage to the building. When securing guy wires (field-supplied) to the roof, heavy-duty anchor brackets (field-supplied) must be bolted to the roof structure.

⚠ CAUTION

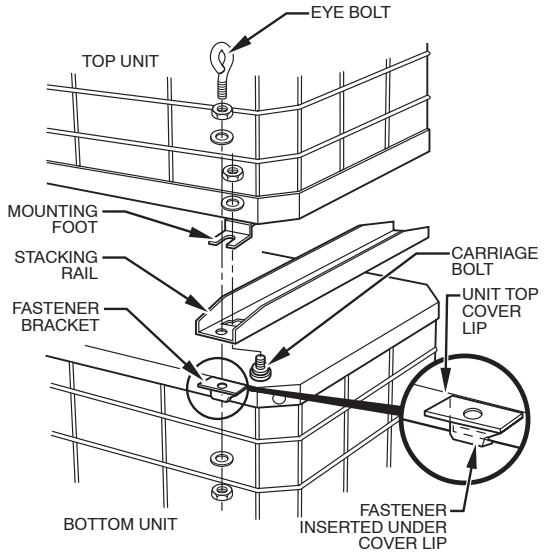
UNIT DAMAGE HAZARD

Failure to follow this caution may result in unit damage.

Attach 4 heavy duty, field-supplied guy wires to eye bolts to avoid structural or equipment damage, especially where winds over 50 m.p.h. are likely.

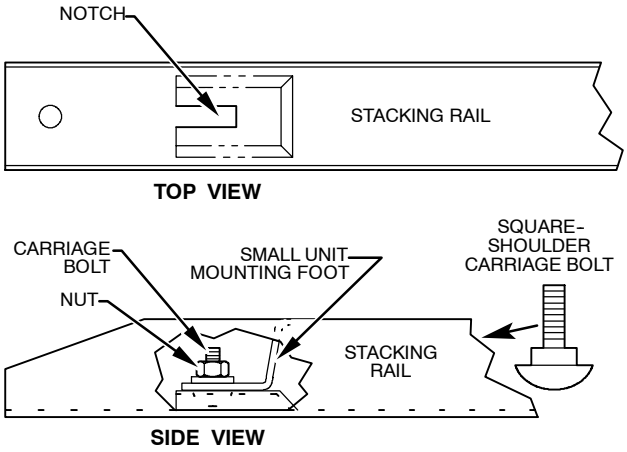
1. Follow steps 1-6 in Stacking Equally Sized Units section, or Stacking Small Unit on Large Unit section, depending on your application.
2. Secure 4 field-supplied, heavy duty anchor brackets to roof structure as shown in Fig. 5. Distance of brackets from unit must permit for a 45-degree angle between roof structure and each guy wire (see Fig. 5).

NOTE: If wind baffle accessory is to be used in conjunction with the stacking kit, it will be necessary to drill 2 holes in the wind baffle. Locate the holes to allow the coil-side guy wires to pass through the baffle without obstruction.



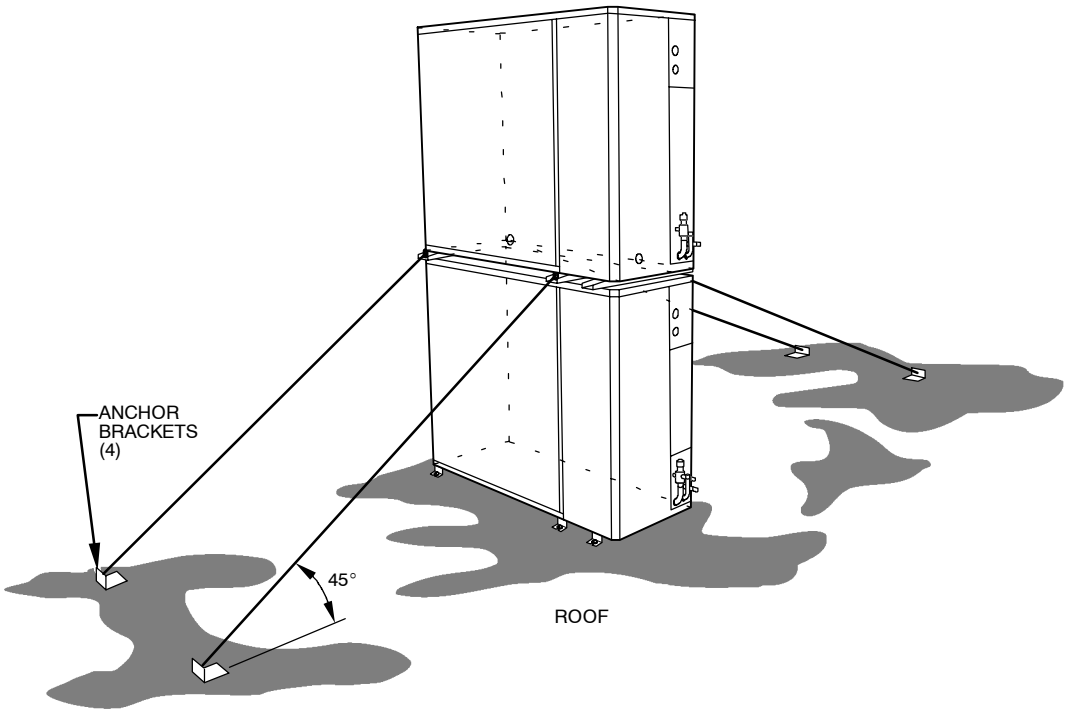
A06419

Fig. 3 – Securing Fastener Brackets, Mounting Feet, and Stacking Rails



A06420

Fig. 4 – Secure Top Unit Mounting Feet to Stacking Rail Notches (53DS900076)



A06421

Fig. 5 – Guy Wires Installed for Rooftop Application

Copyright 2006 CAC / BDP • 7310 W. Morris St. • Indianapolis, IN 46231
Printed in U.S.A. Edition Date: 08/06 **Catalog No: IIK-53DS900-1**

Manufacturer reserves the right to change, at any time, specifications and designs without notice and without obligations.

Replaces: 38-3SI / 533-853